

1370.0 - Measures of Australia's Progress, 2004

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Contents >> Population, participation and productivity

Economic and Social influences on improvements in national income

Following the downturn of the late 1980s-early 1990s, Australia experienced more than a decade of sturdy economic growth. Between 1992-93 and 2002-03, the average rate of growth in real net national disposable income (RNNDI) was 4.0% per year.

Over the same period, Australia's population grew at an average rate of 1.2% per year, implying that per capita RNNDI (one measure of material living standards, and Measures of Australia's Progress's headline indicator for the income dimension of progress) grew by 2.8% a year.

Analysing changes in Australia's national income

There are many ways of analysing changes in Australia's national income. One illuminating perspective, used by the Treasury in their **Intergenerational Report**, considers changes in the number of people working, the hours they work and the value of the output they generate for each hour worked.¹ How many people work, in turn, depends on the age structure of the population, their participation in the labour force and the employment rate. This style of analysis begins from the following decomposition:

Real net national disposable income / Total Population

= Real net national disposable income / Real GDP

x Real GDP / Hours worked (commonly called 'labour productivity')

x Hours worked / Employed persons ('Average hours worked')

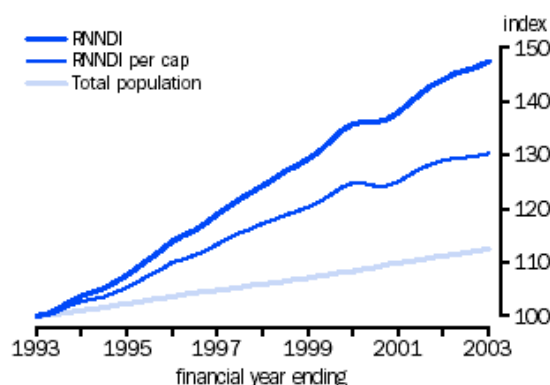
x Employed persons / Labour force

x Labour force/ Population aged 15 years and over ('participation rate')

x Population aged 15 years and over / Total population

More discussion of each of the components in the decomposition follows.

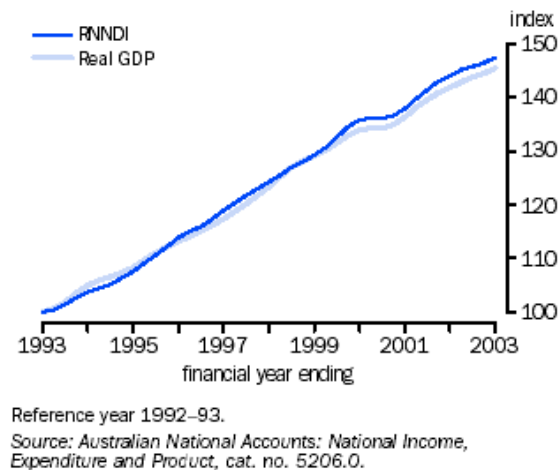
Real net national disposal income per capita and total population



Reference year 1992-93.

Source: Australian National Accounts: National Income, Expenditure and Product, cat. no. 5206.0.

Real net national disposal income and real GDP



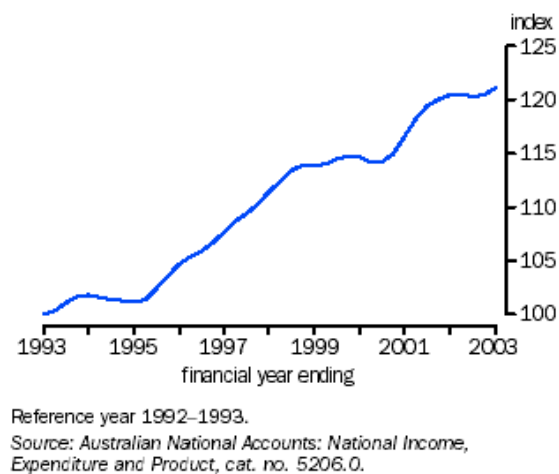
Real net national disposable income and real GDP

Real net national disposable income differs from real GDP because it takes into account:

- Income flows between Australia and the rest of the world.
- Changes in the relative prices of Australia's exports and imports (the terms of trade).
- Consumption of fixed capital (the depreciation of machinery, buildings and other produced capital used in the production process).

Notwithstanding these differences, RNNDI and real GDP show similar trends: between 1992-93 and 2002-03, the average rate of growth in RNNDI was 4.0% per year, whereas growth in real GDP was a little weaker, at 3.8% per year. The major contributor to the difference was changes in the terms of trade.

GDP per hour worked



The RNNDI to real GDP ratio increased 1.4% during the period 1992-93 to 2002-03 - an annual average growth of 0.1%.

The commentary **National income** discusses GDP and RNNDI in more detail.

Labour productivity

During the past decade, the amount of GDP per hour worked rose by more than 20% - an annual average growth of 2.1%.

The improvement in labour productivity reflects two kinds of change - increases in the ratio of capital to labour ('capital deepening') and improvements in multifactor productivity (the amount of output per unit of labour and capital combined). It is possible to estimate the relative contributions of these two influences, but only for the

market sector (measures of multifactor productivity are not available for the economy as a whole).

During the 1992-93 to 2002-03 decade, labour productivity in the market sector grew each year on average by 2.6%. Capital deepening grew at an average annual rate of 3% and the average annual growth rate for multifactor productivity was 1.3% during the same decade.

Underlying these changes were influences such as technological advances, improvements to the quality of labour or management practices, organisational change, and shifts of labour, capital and other inputs toward firms or industries that are more productive.

The commentary **Productivity** discusses multifactor and labour productivity in more detail.



Average hours worked

During the past decade, the average hours worked by employed people fell by 3.0% - an annual average fall of 0.3%.

During this period, there was a strong rise in the number of part-time employees (up by 51%, whereas the number of full-time employees rose by 16%). There was a partly offsetting increase in the average working hours of full-time employees.

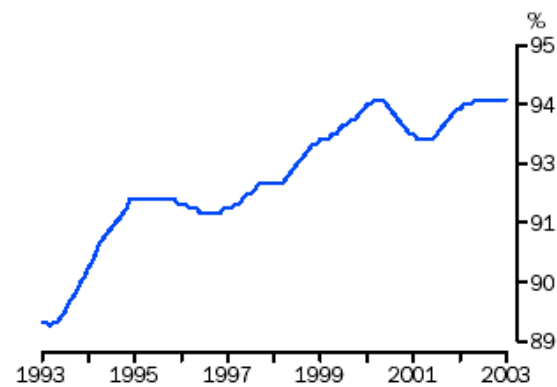
For more information on average hours worked, see the commentary **Work**.

Ratio of employed people to labour force

During the past decade, the proportion of the labour force that was employed rose from 89% to 94% - an annual average growth of 0.5%. This was mirrored by a fall in the unemployment rate, and reflected in part the generally buoyant state of the Australian economy through the past decade.

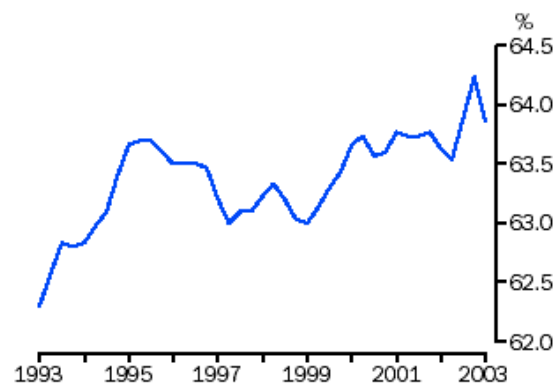
For more information on the ratio of employed people to labour force, see the commentary **Work**.

Ratio of employed people to labour force



Source: Australian Labour Market Statistics, cat. no. 6105.0.

Participation rate



Source: Australian Labour Market Statistics, cat. no. 6105.0.

Participation rate

Between 1993 and 2003, the labour force participation rate rose from 62% to 64% - an annual average rise of 0.2%.

Men and women showed opposite trends over the 10 years - the participation rate for men fell from 74% to 72%, whereas the rate for women rose from 52% to 56%.

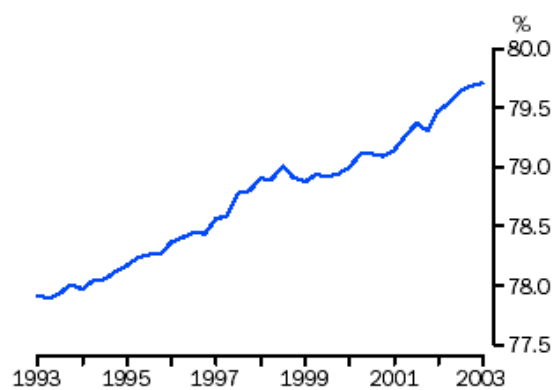
For more information on participation rate, see the commentary **Work**.

Ratio of population aged 15 years and over to total population

During the past decade, the proportion of the population that was 15 years of age or more rose from 78% to 80% - an annual average growth of 0.2%. This is consistent with the pattern of structural population ageing in Australia.

The commentary **Population** discusses ageing in more detail.

Ratio of population aged 15 years and over total population



Source: Australian Labour Market Statistics, cat. no. 6105.0 and Australian Demographic statistics, cat. no. 3201.0.

Influences on growth in Australia's real net national disposable income, 1992-93 to 2002--03

Component	Contribution (Average percentage points per annum)
Real net national disposable income / Real GDP	0.1
Real GDP / Hours worked (labour productivity)	2.1
Hours worked / Employed persons (average hours worked)	-0.3
Employed persons / Labour force	0.5
Labour force / Population aged 15 years and over (participation rate)	0.2
Population aged 15 years and over / Total population	0.2
Real net national disposable income / Total population	1.5

Conclusion

A summary of the contribution to growth by the different components is provided above. Of the five components, the largest contributor to growth in real net national disposable income during the past decade has been the improvement in labour productivity.

Endnotes

1. Treasurer of the Commonwealth of Australia 2003, **Intergenerational Report: 2002-03** Budget Paper No. 5, May 2002, Treasury, Canberra.

[Previous Page](#)

[Next Page](#)

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